MICHIGAN FARMER.

Devoted to Agriculture, Horticulture, and Domestic and Rural Affairs.

NEW SERIES. Perfect Agriculture is the foundation of all Trade and Industry.—Liebig.

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CHEESE DAIRIES.

Experiments in the management of Cheese Dairies, and manufacture of Cheese.

BY ALONZO L. FISH.

Continued.

If curd is not worked even, the larger lumps will not be cooked enough, or the lesser too much, (like large loaves of bread and small biscuit baked together in one oven,) hence, the cheese is left impregnated with the elements of fermentation, which increase on being exposed to heat, till the cheese is sufficiently swollen (or huffed) for each constituent to occupy a separate space in the same shell or rind. The fluids first attracted together by affiinity, forming small cavities in which they remain *unaffected by salt*, become fetid, and generate an unpleasant odor, which is a fair proof of the quality of rennet used. Curd should be salted warm, it is then most absorbent, and thoroughly cooled before putting it to press, to surpress the combined action of *heat and rennet.* The quantity of salt required, varies with the condition of the curd, size of cheese, amount of heat to which the cheese is exposed in curing, and market for which it is designed.

A well worked cheese, from fifty to one hundred pounds, requires one pound of refined salt to forty pounds of curd, to remain in the cheese after it is pressed and exposed to a temperature of from seventy to eighty degrees. This may be varied from two to four pounds to the hundred, according to the texture of cheese required. —small cheese requiring less and large cheese more.

A degree of moisture is necessary in cheese for a maleable texture, but this should not be from *animal fluids retained in the curd.* A high salted cheese immediately exposed to a high temperature, becomes sour, hard, dry and crumbling; the same exposed to a cool, damp atmosphere retains sufficient moisture to be soft, yet solid.—A cheese light salted in a high temperature will cure quick, become porous, huffy and stale. *Curd from hay milk*, requires much less salt, than that from grass or grain feed, as it is poorer and will retain salt like lean meats. The richer the milk, the more salt is required to control the animal properties, and the *less absorbent the curd*, the pores being filled with the finer buttery particles. (Vide table April and August.)

More salt is required in hot weather also, to over-rule the *combined action of rennet* and heat *neither of which will be effective alone.* When curd is ready to press, it is important to *dispossess those decomposing agents.* The gastric juice (or coagulator) is a *fluid*, and works off with the animal fluids in whey; and the only way to get rid of it, is to work the curd down *fine and solid* and *work the whey all out.* Then cool the curd thoroughly before pressing, and the cheese will be solid and keep its place. But if the whey is not all out, the decomposer is yet on hand, continues its action (aided by heat) till *an equilibrium of chemical action is destroyed in the cheese*, and the fluid properties leak out in fetid whey and oil, leaving it a rank and worthless article. *In short*, the proper method of using salt must be arrived at by a close observation as to its *chemical combination* with the *constituent properties* at different ages of the cheese with different sizes, heat, dampness, &c. This (although an essential point) has not been sufficiently determined by chemical analysis, to be reliable.

Pressing.—When curd is properly tempered for pressing, a cotton or linen cloth is spread over the hoop, the curd is put in and pressed with from three to twelve tons weight, turned twice in eight and forty hours, into clean dry cloth. The press should be faithful and follow down as the curd yields (when young) to press out whey before a rind is formed to prevent its escape. There is no danger of too much pressure *after the first ten minutes.* The press, hoops, cloths, &c., should be cleaned with lye *often*, to keep rind from cracking. The cloth is taken from the cheese when it is taken from the hoop. The cheese is set on a table for a few hours, till dry enough to absorb oil, and then painted with annatto, mixed in strong lye, (from common ashes) kept in a jar for ready use. This toughens the rind so that it will not require much grease after the first coat, to make a smooth rind, if rubbed often with the hand moistened with oil.

The paint will fade to a rich butter color, which is as high a color as is desirable. A firm rind may be formed upon cheese when young, by a careful exposure to drying air, frequent rubbing with the hand, and no more oil than will readily incorporate with the rind. If more grease is used than will be taken up, it will sooner or later flake off, leaving the cheese scabby without rind, exposed to cracks, flies, mould, &c. Oil for greasing cheese is obtained from cream skimmed from whey (after standing

24 hours;) it is churned till separation takes place like butter, then melted over a slow fire till it is turned to oil. A preparation of beeswax, from ½ to ¼, mixed with oil, will make a rind impervious to flies. It is most desirable that cheese designed for foreign markets should be in a proportion half as thick as they are wide and not to exceed 100 lbs. in weight. The size of the hoop may be calculated from the number of gallons of milk; each gallon will make one pound of cheese.

A cheese	21	inches	wide	will	weigh	14½	lbs. to each inch in depth.
"	20	"	"		12	lbs.	" "
"	19	"	"		10½	lbs.	" "
"	18	"	"		9	lbs.	" "
"	17	"	"		8	lbs.	" "
"	16	"	"		7	lbs.	" "
"	15	"	"		6	lbs.	" "
"	14	"	"		5	lbs	" "

Cheese of the above proportions are banded with cotton cloth to keep them in shape. The band should not cover more than an inch, or inch and a half of the flat surface. Heavy cheese must be banded with cloth that will not stretch, or its gravity will make them ill-shapen.

In April last, I divided curd into two equal parts, after it was salted, and ready to press, and pressed in equal and varied shapes to ascertain the result of varied heat, salt, etc. April 24th, (see schedule of April,) No. 1 was kept in a room of from 90 to 100 degrees heat; did not huff, but not having rennet enough to keep pace with the heat, soured, was hard, dry and smart; shrunk twelve per cent in sixty days. No. 2. kept in temperature not exceeding seventy-five degrees, did not huff, cured slow, was soft and mild flavor, shrunk nine per cent in ninety days.

April 26th, doubled rennet; put cheese No. 3 by side of cheese No. 1; No. 3 huffed in three days, in twenty days run oil, tainted and spoiled. No. 4 put with No. 2, huffed, cured quick, and was light, porous and sharp. Doubling the amount of salt would control rennet, and keep cheese from huffing; but did not prevent them from souring, becoming hard and unmerchantable. The time of curing was in proportion to the amount of heat and rennet used. Some of the high salted cheeses in a hot room, *were bitter;* but none in the cool room had that flavor were longer curing, shrunk less, and were better cheese. The same course was taken in August, by dividing several day's curd, *each* day into three equal parts, pressed alike, and exposed to different temperatures in curing. The result was in favor of a medium rate of salt and heat, high salting and heat, making hard smart cheese; low salting and heat, soft, mild, and tasteless; low salting and high heat, porous, soft and sharp.

To be Continued.

☞To protect cherries and other fruits from birds, hang pieces of looking-glass or tin among the branches of the trees. The same is a good remedy to scare birds from corn fields; pieces of tin strung about the field will drive away all thieves of the feathered tribe.

Fertilizing Properties of Rain Water and Snow Water.

In old times it was thought that snow was somewhat fertilizing, on account of the *nitre* it contained; and it is a remark, common at the present day, that late snows are the "poor man's manure." Many have considered these ideas mere whim; not founded on any thing like facts. The researches, however, of Liebig and other agricultural chemists begin to show that these ideas are not mere whim, but that the observation of practical men, which undoubtedly led to them, are founded in truth.

We do not know that snow really contains much nitre, which is now called saltpetre—but it contains *nitrogen*, which is one of the ingredients of saltpetre, and which is a strong fertilizer, and required in the growth and maturing of plants and vegetables. A large portion of the atmosphere which we breathe, say seventy-nine parts out of one hundred, is nitrogen; and when this is combined with hydrogen, the substance called ammonia is formed. Hence, ammonia is valuable as a manure. The flesh of animals—the flesh of our own bodies, and much of the food that we eat, contains nitrogen; and hence, also, the round of changes which is constantly taking place. The nitrogen of the atmosphere combines with the hydrogen which is floating about in it, and forms ammonia,—this is dissolved by the moisture in the air, and comes down with the rains and dews and snows,—these are imbibed by plants,—plants are eaten and assimilated by animals. Animals die—the nitrogen and ammonia are given off by the putrefying or decomposition of these bodies, pass into the air, and are again dissolved by the moisture—again brought down by the rain and dews and snows, to be imbibed by plants—to be eaten by animals—to be given off again when they die and thus keep up the ceaseless round. Hence, farmers may see not only the value of snow and rains, but also the importance of preserving the ammonia in manures of different kinds. It is a gaseous, invisible substance, and will escape into the atmosphere unless some material be presented to absorb it, or to combine with it.

When your dung heap begins to heat and ferment,—ammonia is flying off—put some soil, or plaster of Paris or fine charcoal on it, and it will be absorbed and fastened in a form in which it can be applied to your crops. When an animal dies and begins to petrefy, ammonia is flying off—put some earth over it, or Plaster of Paris, or charcoal powder on it. The ammonia will be absorbed and saved, to be placed where you desire for a fertilizer.

The value of it in rain water, or rather the value of rain water in consequence of containing it, can be satisfactorily proved, and has been proved by Mr. Pell, as described in the New York Agricultural Transactions. "I have grown plants," says he, "in pure charcoal dust by watering them with rain water; the rain

water yielded ammonia, and consequently nitrogen as one its elements. I found with spring water I could not grow them after a certain period in charcoal dust; but with rain water most successfully."—This proves that the plants grown by him did not imbibe the ammonia from the air, but from the rain water, because if it had, they would have grown as well when watered with spring water as with rain water. It also proves that charcoal dust is good to absorb ammonia, and hence is one reason why charcoal dust is valuable as a manure.

In regard to rain water, Mr. P. goes on to state, that Sir Humphrey Davy calculates that if a pint of rain water contains a *quarter of a grain* of ammonia, a field of forty thousand square feet must receive yearly upwards of eighty pounds of ammonia, or sixty-five pounds of nitrogen. It has been found that the annual fall of rain in England, (which is a moist country,) on this extent of surface, is, at least, 2,500,000 pounds. This is more nitrogen than is contained in the form of vegetable albumen and gluten in 2,800 lbs. of hay, or 20,000 lbs. of beet root, which would be the yearly produce of such a field. It is, however, less than the straw, roots and grains of wheat, &c., which might be made to grow on the same surface, would contain; therefore the farmer must supply the deficiency of nitrogen by using manures that contain ammonia, and this constitutes the chief value of animal manures.—*Maine Farmer.*

Take care of your Trees.—Enquiries are daily made of us as to what shall be done with cherry trees when the bark has become deadened on the body and the sap or gum is escaping. We have practised with success cutting the dead portion off smoothly until we came to clean, healthy bark, then washing with strong soap suds, applying fresh cow manure and binding with a cloth, afterward winding the whole body of the tree either with moss or straw.—One season will generally suffice for the tree to form new bark. —*Cleveland Herald.*

Benefit of Toads.—These animals are very useful in gardens. They live entirely on insects which they devour without much regard to the species—the selections being made by toads of different sizes, according to the bulk they are able to swallow. While the toad is small he is only able to feed on gnats, small flies, the smallest beetles, &c.; but when full grown he will swallow almost all insects that infest the garden or field, whether in the larva or perfect state. The number of insects which they are capable of devouring is surprising to one unacquainted with their habits. Several years since the writer ascertained that a large toad, which he kept confined for the purpose of experiments, would devour from eight to twelve grubs, the larvæ of the May bug or cockchafer, (*Melalontha vulgaris*) per day. There is another advantage which they have over fowls, in gardens—they will do no injury to any plants, their mode of taking the insect being such that the plant is scarcely touched in the act. A few boards should be laid round the garden, raised about an inch from the surface, under which the toads will take shelter in the daytime, as they only feed during the night.

Education for Farmers.

Messrs Editors:—One of the features of the age, is much talk about the education of farmers and the establishment of Agricultural schools. Agricultural departments in colleges and agricultural schools, established on the principle of those existing at the present time, may answer well for the sons of the rich, and here and there one who by dint of personal energy, may work their way to the privileges they afford, yet how small a proportion of the farmers of the next generation will be benefitted to the value of a pin's worth, by any project that has yet been adopted for the advancement of practical agricultural knowledge.

The common school appears to us a proper place for giving instructions, they are the people's colleges, in them, the great mass have received their education, and in them, the majority will probably pass their school day privileges through all time.

Consequently, then, agriculture and the rural arts, must become a branch of science taught in our common schools. Nothing short of this will ever effect the objects which have so laudably engaged the attention of some of the noblest sprits of the age. And why may it not with all propriety be done? In all our primary schools it is required that certain branches, such as Arithmetic, English Grammer, and Geography shall be taught by competent instructors. Why not add to these the rudiments of agricultural knowledge. In many of these schools, Latin, Algebra, Philosophy, and Chemistry have their places. Will chemistry applied directly to the purpose of cultivation, and also mineralogy with its antecedent science Geology, so far as they relate to the formation of soils, be less appropriate or less useful than those? It has been objected, that our teachers have not qualified themselves to give instruction in these matters. No matter, the time was, when teachers of several of the first named branches, could not be found qualified at all to give instructions in them and when the demand was made, not a few youug men and young women, went to work valiantly and prepared themselves, with no other aid than the best authors they could obtain and their own good sense, for the new duties they were called on to perform. Others saw that more was demanded from them in these matters than had been from their predecessors, and sought the aid of high seminaries to prepare themselves for their new position. What was the consequence? Progress surely, and we have seen experiments,

both in philosophy and chemistry as successfully profound in the little brown school house as they ever were in the laboratory of the most learned professor. As successfully we say not as generally, for they cannot in any wise be expected.

It cannot be expected, however, that all the knowledge desirable for the farmer in these matters, can be obtained in the district school. That place would be an unrivalled spot on earth if it were so, for the advantages of no seminary, however ample its means of giving instruction, can fill the measure of thought, or give perfection to the faculties of man. He may go to the deepest fountains, and drink in draughts of astonishing dimensions, and when he turns away he will find he is not full—that the mind is still longing for more, and with all his research its cries would still be "not enough."

So it will be with many of those who commence these studies in common schools, some of them may, to be sure, be glad when the task of thought is over, and they may pass into that state of vegetation which is not pained by investigation or gladdened with success.—Others, whose circumstances forbid their improving the opportunity with oral teachers, will pursue the subject on the strength of their own mental resources, and become greatly learned under circumstances where, if they had not received the priviledge of pursuing the branches under notice, they would droop or perhaps never have had a solitary thought of investigating their merits.

Then, we should have another class who would go to our agricultural schools and colleges, and there receive every benefit that the most ample means afforded, to aid in their advancement. And when these benefits were all achieved, and they went into active service in the field, they would find congenial, if not as deeply educated minds there, and very probable there would be oft repeated demands upon the superior knowledge that they had been permitted to acquire, which it would be very pleasant to communicate. Thus the parts of the whole would be fitly joined, and each part in its appropriate assignment would nobly aid in causing the most unpromising places of earth, again to bud and blossom like the rose.

Yours truly, W. BACON.

Richmond, (Mass.) March, 1848.

[*Boston Cultivator.*

Preservation of Post.—Mr. Phillip Wilbur, of South Dartmouth, has reported an important experiment which he has tried with salt in preserving fence posts. Of two posts, the same kind of timber, cut and set at the same time, one has long since decayed and become worthless, whilst the other, saturated with salt, now stands in a remarable state of preservation. The manner in which Mr. W. applies the salt is by boring an inch and a half or two inch hole obliquely about eight inches above the ground, and fills with salt from time to time as it becomes dissolved.—*Boston Cultivator.*

Influence of Horticulture.—That the habitual association with interesting plants and flowers exert a salutary influence upon the human character, is a truth universally felt and understood. No one ever dreams of any possibility of mistake, in estimating the disposition of those who delight in gardens, rural walks, and arbors, and the culture of elegant shade trees and shrubbery. Whoever anticipated boorish rudeness, or met with incivility, among the enthusiastic votaries of Flora? Was it ever known that a rural residence, tastefully planned and appropriately adorned with floral beauties, was not the abode of refinement and intelligence? Even the scanty display of blossoms in a window, or the careful training of a honey suckle round a cottage door, is an unmistakable evidence of gentle spirits and an improved humanity within.—There may, possibly, be natures so gross, as to be incapable of perceiving the beauties of the vegetable creation—and others inaccessible to the influence of genuine taste—and it is said there are persons insensible to the charms of the sweetest music.—*Boston Cultivator.*

American Agriculture.

From the Southern Cultivator.

We are in the receipt of all the agricultural journals published in the United States; and it gives us great pleasure to mark the new and able correspondents, and the increased editorial ability and spirit which they display.

We rejoice at this evidence, that the noble work of advancing American Agriculture will command in the year 1848, the best service of more talent, more science, more learning, and more of invaluable practical research and experience, than it ever did before. From the energy, skill and indomitable perseverance of so much American Mind, we anticipate, at no very distant day, vast and auspicious results. Compared with the length and breadth of the field now ready for the harvest, the laborers are indeed few. Better, however, than seed sown in good ground, they will achieve improvements, such as the world has never witnessed.

We are a *peculiar* people, and Providence in its wisdom has given us a *peculiar* country. Its very vastness, embracing almost every variety of climate, soil and minerals—its immeasurable capacity to feed, clothe, elevate and render happy, civilized man, fill us at once with amazement at the grandeur of our prospective power, and with fear and trembling at the greatness of our present responsibility. To the Farming Interest of our country, its patriot sons ever look for a stable, conservative influence to sustain its dignity and honor, in the most trying emergencies. Confined to the mixed and impulsive population of commercial cities and manufacturing

towns, the sovereignty of the people would be lost in anarchy and end in despotism. But a free and independent yeomanry, well versed in the theory and practice of a representative government, and far outnumbering the whole urban population of the nation, will, for many ages to come, control and shape the destiny of North American Institutions. Nor will the Agricultural Press be wanting in power, for good or for evil.

From our boyhood up we have watched the signs of the times. They have been pregnant with mighty events. The period of quickening has arrived, and the day of delivery is not far distant. Agricultural Education, imparting thorough mental training, and sound scientific attainments to all that cultivate the earth, are measures next in order in American history. To this end, agricultural reading must be more varied, and rendered more attractive to young and ardent minds. An effort should be made to build up a *rural literature* of our own. We are emphatically a reading people. Alas, what of good can we say of our most popular reading? A vile decoction, made by steeping a single grain of virtue in a thousand grains of vice and folly. This should not be, in a land of moral and intelligent parents. All editors of agricultural works, and their contributors, should aim to interest as well as instruct the popular mind. We expend hundreds of thousands to circulate political tracts, and aid in putting down one party, and setting up another. If Congress and each administration would give a tithe of the money annually expended for party purposes to aid in diffusing a knowledge of agricultural science among our whole rural population it would add immensely to the wealth and improvement of the country.

Wool Depots.

We copy from the last number of the Farmer's Library the following pertinent remarks of T. C. Peter's Esq. of the Buffalo Wool Depot in reference to the object, method of doing bbsiness, and the advantages of Wool Depots.

BUFFALO. N. Y. Dec. 16, 1847.

H. S. RANDALL, Esq. *My Dear Sir:* Your kind favor of the 12th inst, making inquiries relative to the Wool Depot system, is before me. It will give me pleasure to answer your queries.

THE OBJECT.—Upon no sheep is the wool exactly alike in any single flock. In most flocks there is a great diversity—greater than there should be for the farmer's profit. There is, then, a variety of grades of wool in every flock, and in every section of the country where wool is grown.

Manufacturers first grade the wool; that is, sort the fleeces, making from five to eight or nine different grades. Each fleece is then opened, and stapled, or sorted into the various grades of the factory. Some manufactories use only the finest, others only the coarsest, and others again use only one kind of the intermediate sorts so that from a single flock, I sold this year wool to five different manufacturers, no one wanting or working the kind that the other wanted.

The object of the Wool Depot is to sort and arrange the wool, that the manufacturer can readily obtain the particular kind adapted to his machinery, and to obtain for each sort its fair market value.

METHOD OF DOING BUSINESS.—The system originated with Mr. H. Blanchard, at Kinderhook, some three years ago. Last year, we sent our wool to Mr. Blanchard, and during the winter I visited his establishment, and was so well satisfied with the operation of it, and of the vital importance of the system to the wool-growers everywhere, that I at once made arrangements to open one at this point. I accordingly commenced operations in the spring, and have been successful beyond my most sanguine expectations.

I have a competent and experienced sorter, and when wool is sent in, it is at once sorted in the fleece, each sort weighed, and entered in a book under the name of the person sending it.

I have adopted Mr. Blanchard's method of sorting, as experience has shown that to be the best, under, all circumstances. I make, then, five sorts, taking full-blooded Merino for No. 1 and grading down to coarse common wool, which is No. 5. Saxony I grade into Extra, Prime 1, and Prime 2. Then there is a kind of wool which is admirable for combing, and another kind that is wanted for De Laines; these form five more sorts, making thus ten sorts. But as there is such a difference in the condition of wool when brought into the Depot, I usually make two sorts of each number. Thus I have No. 2, and No. 2A. No. 2 isusually good, but No. 2 A is of the same grade, but is in better condition, every way a choice article, but still not fine enough to go into a higher grade. The wool is actually worth two or three cents per lb. more than the other number to which it belongs, and but for making this distinction, would not bring its full value. When the wool is properly sorted, it is piled up in a manner that will enable the purchaser to see it at a good advantage;—insured, and held until the market requires it. I make all my sales here, and for cash. When the sales are closed, an account is made out and sent to those who have sent me their wool; usually, an account is rendered as fast as any part of a man's wool is sold. I have often been asked, how I could tell whether any man's wool was sold, unless the whole of a sort was sold at a time. It is very easy. Suppose A, has 100 lbs. of No. 1, and I have sold 20,000 lbs. out of 40,000 lbs.—that being the whole amount in the Depot. I have sold one-half of

each man's No. 1, and I turn to A's account and give him credit for 50 lbs. sold, and so go through and credit each man with his proportion of that number sold.

The charges are, for receiving, sorting, and selling, one cent per lb., and the insurance—which is usually about 30 cts. on $100, for three months. Cartage from the dock is usually three cents per bale. The sacks are returned or sold at the option of the owner. They are usually worth about fifty cents, more or less according to their condition. Each man's wool is carefully examined; if put up in bad order, it is so noted, and a deduction made by the sorter, to make it as it should be. So that it is no object for a man to send to the Depot wool in a bad condition.

The Advantages.—The foregoing facts would seem to be so plain that it cannot be necessary to refer to the advantages. No man, however, is more at the mercy of the speculator, than the wool-grower. The very fact that he has so many kinds of wool in his clip, prevents him from ascertaining the market value of the whole, for being in comparatively small quantities, he has not enough, if ever so well sorted, to make it an object for the different manufacturers to visit him. He is therefore compelled to sell his whole clip at the price of his present quality, and at prices from five to fifteen cents per lb. under the real market value of his wool. Allow me to illustrate by an example. A farmer has his wheat, corn, oats, and barley, all mixed, and carries it to market in this condition. Will anybody give him the value of each kind of grain? On the contrary, they would not be willing to pay even the value of the cheapest kind. And yet each kind by itself has a market value. Precisely in the same situation is the wool-grower, except that he has no means of knowing the value of the various sorts of wool, except from the speculator.

The advantage of the Depot system, then, is, that there his wool is properly sorted. The wheat is separated from the corn, the corn from the oats, and the oats from the barley, and each is made to bring its fair market value. By having an extensive correspondence among the manufacturers throughout the country, I am kept constantly advised of the market; and knowing the price of cloth in the cities, I am enabled to know to a certainty what the price of the various grades of wool should be.

When the manufacturer can get the kind of wool he wants, and in large quantities, he is willing to pay, and does pay a better price than when he has to buy that which he does not want to get the right sort. It also equalizes the market, and brings the producer and the manufacturer together, without being compelled to pay agents or speculators, and prevents that fluctuation of the market which is always produced by speculation.

But there is another very great advantage growing out of the system. It enables the wool growers in the various sections of the country to compare wool, and to know who has really the best and most profitable kinds of sheep. It has been strikingly manifest with me this season. For I have been enabled to point out to people in different States West, where they could find the most profitable sheep, by the wool which had been sent me. And in one instance men had been over five hundred miles after sheep, and paid high prices, when there were sheep in their own town worth double the money.

There is no difficulty in sending wool here from any part of the country bordering upon the Ohio, or its tributaries. The expense of transportation will range from one to one and a half cents per lb.—depending much upon the bargain made with the clipper. I have received wool this year from all the Western States, in some instances as far West as the Mississippi River, and the average cost for freight has been about one cent per lb.

It was urged by many last spring that this city was not a good point, inasmuch as it was not sufficiently central in its location. For nothing is more certain, than that a wool Depot, to be successful, must be so located as to command a large amount of wool. The larger amount you can concentrate at a point, the more rapid and sure will be your sales. To this city the products of the West naturally tend, and to this point the producer can calculate with great certainty when, and at what expense it will arrive. But after its trans-shipment here, expenses accumulate, without any corresponding benefit. And it is peculiary so, in regard to wool, coming as it often does in bad order, sacks torn, broken and wet.

But I have made my letter already longer than I intended, and in speaking of my own Depot have perhaps gone more into detail than is necessary.

This much I must be permitted to say to every wool-grower, that the Wool Depot system, properly conducted and patronized, is indispensable to ultimate and profitable success.

I remain, my dear sir,
Very sincerely yours,
T. C. Peters.

Mushroom Gentility.—A good story is told of a young lady in New York, belonging to "that portion of the "upper ten thousand" mushroom gentry, which sprung from low obscurity without having anything to recommend it but riches. The story is that this young lady thought the women out west must be sadly in want of society, because, they associate with tradesmen, (mechanics,) and retail storekeepers.

"Yes, yes," said an old man present "they are, no doubt, sadily in want of society, just as your parents were when your father grew rad-

ishes and asparagus in the garden, and your mother retailed them in the old fly market." The young lady fainted. Oh! la!—*Iowa Far.*

Geography and History of the Quince.

The quince is supposed to have been originally a native of Sidon, a city of ancient Crete, now the island of Candia; but it is much more probable that it was only first brought into notice in that city. It is considered, at present, as indigenous to the south of France, particularly on the borders of the Garonne, and to Germany, on the banks of the Danube. By some, the tree is thought to be indigenous to Britain; and Phillips states, in his "Pomarium Britannicum," that quinces grow in such abundance in some parts of the Wealds of Sussex, as to enable private families to make quince wine in quantities of one hundred to two hundred gallons in a season.

The quince was known to the Greeks and Romans, and both nations held it in high estimation. Columella says, "Quinces not only yield pleasure, but health." He speaks of three kinds —the "Struthian," the "Must Quince," and the "Orange Quince." Pliny mentions many kinds, some growing wild in Italy, and others in cultivation, so large that they weighed the boughs, on which they grew down to the ground. He also says that some were of a green, and others of a golden color, the latter of which were called *chrysomela.* The only kind that was eaten raw, he states to have been raised by grafting the large quince upon the stock of a small variety, called *struthla.* "All kinds of this fruit," continues he, "are grown in boxes, and placed within the waiting-chambers of our great personages, in which men wait to salute these personages as they come forth, every morning." It appears from the same author, that quinces were used to decorate the images of the gods, which were placed in sleeping-chambers round the beds; whence it follows, that the Romans did not think that there was anything either injurious or unpleasant in their smell. He gives directions for preserving the fruit, by excluding the air from them, or boiling them in honey; or plunging them in boiling honey, a practice in use with this, and other fruits, in Genoa, at the present day. He also writes much on the medical qualities of this fruit. "Quinces," says he, "when eaten raw, if quite ripe, are good for those who spit blood, or are troubled with hemorrhage." The juice of raw quinces, he states to be a sovereign remedy for the swollen spleen, the dropsy, and difficulty of taking breath, particularly to those who cannot conveniently breathe, except when in an upright position. The flowers of the quince, either fresh or dried, he tells us, are good for inflamed eyes. The root of the tree was used, not only as a medicine, but as a charm.

The date of the introduction of the quince into Britain is unknown. Gerard mentions it as growing in gardens and orchards, and as being "planted often times in hedges and fences belonging to gardens and vineyards;" from which we may infer, that it was by no means rare in his time; and, indeed, in all probability, it has existed in England from the time of the Romans.

The largest recorded tree of this species in Britain, is in Radnorshire, at Maeslough Castle which is twenty-one feet in height, with a trunk ten inches in diameter, and an ambitus or spread of branches of twenty-two feet.

The quince, like most of our orchard fruits, was probably introduced into the North American colonies at the early periods of their settlement. It is very generally cultivated for its fruit, and is usually planted in clumps of bushes rather than as individual or shrubs. Of late however orchards of it have been formed on the rich loamy spots of Long Island, and other parts of the country, and doubtless, in time, their owners will derive a handsome profit.

Soil and Situation.—The quince prefers a moist but free soil, near water, and a situation rather open, but sheltered. In dry soils, neither the tree nor the fruit will attain a large size; and in situations exposed to high winds, the fruit is liable to fall, before mature. The finest specimens of quince trees in Britain, are said to be found in old orchards adjoining ponds; it being customary, formerly, to plant a quince tree in every apple orchard. If the soil be too dry or meagre, an artificial one may be prepared, or a hole may be excavated for each tree to a depth of ten or twelve feet, and then filling it with loose stones to within two or three feet of the surface, and the remainder with rich loamy earth or mould. Such a preparation is well worthy of expense in every garden where this tree will not otherwise grow.

Propagation and Culture.—The quince may be as readily propagated from seeds as the apple and pear; but the quickest mode of raising plants is by layers. It will also grow by cuttings, planted in autumn in a moist, sandy loam. The trees, when planted as standards, should be situated about ten feet apart, and once set out, require but little attention, beyond that of removing the suckers from the roots, and the side shoots from the main stems. To have the fruit a large size, the head of the tree should be kept open by thinning out the shoots; and the fruit ought also to be thinned out, leaving no more on the tree than it can well mature. The tree is of moderately rapid growth, when young, acquiring, in four or five years, a height of six feet; and in ten or twelve years, it attains an elevation of fifteen feet, after which, it continues to increase chiefly in the width of its head. —*Browne's Trees of America.*

☞In Virginia the wheat harvest is in progress, and the crop is represented as being good,

MICHIGAN FARMER.

WARREN ISHAM, EDITOR.

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Organic Elements of Nutrition.

In our last we treated of the inorganic elements of nutrition, ten or eleven in number, which derive their origin in the soil from the decomposition of rocks. There are four other elements which serve as food for plants, called organic, existing in the form of gas, viz: oxygen, carbon, nitrogen, and hydrogen.

If a plant be burned, the ash which remains, constitutes but a very small proportion of it, the most of it having passed off into the atmosphere in the form of the gasses above named. But small as the quantity of ash is, compared with the entire composition of the plant, it contains all the inorganic elements which were needed in building up the living structure. The greater portion of all plants then, consists of the four organic elements, or gasses.

The same is true of all animal bodies. If the flesh (muscular fibre) of animals be burned, 99 parts in a hundred, will pass off in the form of gas, and only one part in a hundred remain in the form of ash. To impart solidity to the bones, however, and make them capable of sustaining the body in an upright position, a much larger proportion of inorganic matter becomes necesary, and hence, if bones be burned, only about one half of their composition will pass off in the form of gas, while the other half remains in the form of ash, consisting mostly of phosphate of lime.

Of two of the organic elements of nutrition, viz, oxygen and carbonic acid, we have already treated, somewhat in detail. It has been seen, that most of the carbon, which constitutes so essential and so large a portion of all vegetables, is derived from the carbonic acid of the atmosphere absorbed by the leaves, and that but a comparatively small proportion of it is derived from the soil through the roots, supplied by the union of the oxygen of the atmosphere with the carbon of decaying vegetables. The oxygen which is appropriated to the growth of the plant is probably derived from the decomposition of a portion of the water which is taken up by the roots, and which holds in solution the various inorganic elements of the soil, the oxygen of the carbonic acid being set free and expelled. The presence of oxygen seems to be absolutely necessary to the germination of the seed. Seed deposited in the earth so deep that the atmosphere cannot reach it, never germinates, and the quickening influence has been found to be due to the oxygen of the atmosphere. Hence seeds which have lain dormant for ages in a state of seclusion from the atmosphere, often germinate, upon being exposed to its influence.

Of nitrogen we have also spoken, to some extent. This gas constitutes 79 parts in a hundred of the atmosphere, and although it exists but in minute proportion in the vegetable and animal organizations, still its functions appear to be of an important character. Its affinities for other substances are very slight, and this is probably the reason why it is so difficult to appropriate it to the purposes of nutrition. Although it exists so largely in the atmosphere, it has never been ascertained, that it enters the vegetable organization through the leaves, as has been shown to be the case with carbonic acid gas. Such a discovery may however, yet be made. But however that may be, certain it is, that it is taken up by the roots of plants in the form of ammonia, which is a compound of nitrogen and hydrogen.

Ammonia is constantly rising from the earth into the atmosphere as the product of decaying vegetable and animal matters. It is true, that its presence in the atmosphere, is so diffused, that it has never been detected by the subtlest analysis of that element. But what the illustrious Sir Humphrey Davy, with all his facilities, could never discover, the great Leibig has brought to light, not by pushing his researches beyond those of his predecessor, but by turning them in a new direction. It never occurred to Sir Humphrey to look for ammonia in the rain and snow which descends through the atmosphere, bringing along with it whatever it meets with in its downward passage. But to Leibig the happy thought occurred. By analysing rain and snow water, he found ammonia as a constituent part; and thus established the fact of its presence in the atmosphere. And thus it is, that nitrogen is supplied to the roots of the growing plant. Being volatile it ascends into the air, as soon as it is formed in the process of the decomposition of animal and vegetable matter, and is thus diffused in minute proportion through

the entire atmosphere. At the same time it is probable that ammonia is formed, to some extent in the atmosphere, by a union of the hydrogen which is floating about in it, with its nitrogen. And thus while it descends in the rain and the snow, to fructify and gladden the earth, its stores in the atmosphere are constantly being replenished from these scources. Hence it is with good reason that snow is called "the poor man's manure" for it is not only "an old saying," but a saying of sound philosophy. The idea advanced by our aged friend in the last number of the Farmer, that it was an advantage to land to rise early and plow under the dew, might have excited a smile in some, but, after all, there is more philosophy in it than some might at first thought imagine.

The ammonia which is generated by the decay and putrefaction of vegetables and animals, does not all evaporate into the atmosphere. A portion of it is retained in the soil, and in the manures applied to it, and is at all times available for purposes of nutrition.

Something further we intended to add about nitrogen, and then there is one other organic element, of which we have not treated, but the whole must lie over for another number.

Hay Making.

As haying time is upon us, we take occasion to call attention to the "more excellent way" of making hay than has generally been practiced by our farmers, as reccommended in the second number of the present volume of the Michigan Farmer. The following paragraph, taken from the Cleveland Herald, is of the same import.

"*Cutting Clover.*—All experience, so far as we have ever read or heard, teaches that clover makes the best hay if cut before the heads become at all ripened, or, in other words, while in full blossom. It should be mown in the morning, raked in the afternoon, made up into small cocks, and if fair weather, allowed to stand in that condition thirty-six hours, then shake it out lightly to the sun, and haul it into the barn before any dew falls."

We may add, that all kinds of English hay may be cured in the same way, and even by a shorter cut still, according to the authority above alluded to. The process there recommended from experience is, to let the grass lie in the swath through the day, and then cock it, and let it remain in that condition a day or two, when it will be perfectly cured, without any shaking out. Hay cured in this way is perfectly bright and sweet, and is actually worth much more than hay cured after the old fasion. And then the saving of labor is immense.

But would not hay remaining so long in the cock, be liable to get wet? Not half so liable as under the old mode of treatment. During the proper time for hay making, it requires all of two days to go through the long and tedious process of spreading, turning, raking, cocking, spreading again, turning again, raking again, and cocking again, and if there comes up, in the mean time, a sudden shower, it is almost sure to be ruined. Whereas, by this method, if the hay be well cocked, it is perfectly secure from the effects of rain, and it is not necessary, that it should remain in that condition much longer than is required to cure it in the old way.

The article alluded to, as having been published in our second number, is under the head of "Benefit of Agricultural papers," and the information was furnished by Mr. Woodruff of Brownstown, who took the hint from an agricultural paper. Try it, try it. It will cost you nothing, at any rate, to put up a cock or two in that way, and you will then know, to a certainty, whether these things are so. It would seem as though there was no lack of inducement to make the trial.

Another Exhibition.

In another column will be found an account of the second monthly exhibition for the season of the Detroit Horticultural Society. The display of flowers was quite imposing, and the vegetables and fruits were quite in advance of those presented at the last exhibition. The strawberries were of gigantic dimensions. A gentleman who has attended similar exhibitions in New York, Boston and Philadelphia, remarked to us, that he had never seen as large and fine lots of strawberries at those exhibitions. Some of the strawberries are said to have measured 4½ inches in circumference. He made the same remark also in reference to the gooseberries. Some of them were as large as a tolerable sized plum.

It was pleasant to see so goodly a number in attendance, all most cheerful and happy, and apparently delighted with what their eyes beheld of the beauties and bounties of nature. It is the right place to go to get rid of the *blues*. He who could retain his ill nature under such

circumstances, ought to be driven from the pale of human society. He is an apostate from humanity.

The Farming Interest.

Why is it, that the agricultural interest, the great interest of the country, an interest which underlays and upholds every other, and is paramount to all other interests put together—why is it, that this great interest is overshadowed and made to hold a subordinate rank in the departments of human industry? The agriculturists of the country outnumber all other classes of the community put together as four to one. The political power of the country then is entirely in their hands, and yet, strange to tell, they almost uniformly select men of other professions, who have neither feelings nor interest in common with their own, to represent and make laws for them.

And why is it, that the many are thus dependant on the few—that the great and leading interest of the country, is subjected to the control of men who have interests of their own to look after which are often in direct contrariety to to those of their employers? For no reason on earth, except that men of other professions are educated to their business, while the farmer is not. The lawyer, the physician, the divine, the merchant, the manufacturer, and the mechanic, are all educated to their business, and if the farmer were as thoroughly educated to his, it would give him an intellectual elevation, which would soon work out his deliverance from so degrading a bondage.

Let the farmer be educated to his business, so far as to understand the principles on which all right practice depends—let him be so far initiated into the mysteries of his art, as to understand something of the nature, composition and properties of soils and of fertilizers, and their various adaptations—in a word, let him be schooled to a tolerable acquaintance with his profession, and it would give an impulse to his intellectual powers, under the influence of which he would go on from one stage of improvement to another, in the very midst of his daily toil; and thus, as a class, our agriculturists would be able to shake off their dependance upon those who have separate and distinct, if not contrary interests to attend to, and take into their own hands the management of their own concerns.

And to this end we must have agricultural schools—not colleges and universities, the advantages of which can only be enjoyed by the rich—but schools in which the elements of the science of agriculture shall be taught, under such circumstances, that those of the most limited means may not be excluded from a participation in their benefits.

This should be done for the benefit of the rising generation. But is there no hope for those who are already upon the stage? Must the present generation of farmers pass away without any participation in the glorious results which are destined to bless those that are to come after them? Are they not to be permitted so much as to see that day?

That day has already begun to dawn, and although multitudes close their eyes upon it, and will to the day of their death, and go down to their graves glorying in their ignorance, yet there are other multitudes who are educating themselves through the agricultural press. No farmer can habitually read a well conducted agricultural paper, and understand its teachings, without having his views enlarged and his mind greatly improved. We know of many a one, who, by this means alone, has become no inconsiderable adept in the science of agriculture.

The best of every thing.

Some people always make a pitch for the cheapest of every thing, cheap cows, cheap horses, cheap plows, cheap waggons, cheap harness, and cheap help, in a word, any thing they are necessitated to purchase, must be the cheapest that can be obtained. In many cases, it is true, in a new country, individuals are compelled to buy the cheapest articles, for lack of means to get better. But there are multitudes who are abundantly able to pay for a valuable article, who are so much in the habit of buying the cheapest of every thing, that a single pickyune is sufficient to turn the scale with them in favor of a poor article in preference to a good one.

But so far as our experience and observation go, this predilection for cheap articles, is far enough from being profitable. As a general thing, it is far the cheapest in the end to pay the price of the very best articles in the market. It costs no more to keep a cow which will give twenty quarts of milk per day, than one which will give only ten—no more to feed an able bodied horse, than a poor one, that will perform

only half the service, and a cheap waggon will generally give way and need repairing after using it a few times, whereas a good one would probably run for years without repairing. And so of cheap help—an additional dollar or two per month will not unfrequently double its value and sometimes much more.

The great object of all agricultural improvement, is to secure the largest possible returns for the capital expended. It is thus, as we have seen, that improvement in stock, of every description, becomes an object of paramount interest to every farmer. And it is for the same reason, that the improvement of the soil, and improvement in the implements of husbandry, commend themselves to the attention of the farmer. The higher the state of cultivation to which land is raised, and the more perfect the implements with which it is cultivated, the more abundant the returns in proportion to the capital expended.

New Work.

We have received, through the mail, a very handsome volume, of 227 pages, entitled Domestic Animals, *history and dsscription of the horse, mule, cattle, sheep, swine, poultry, and farm dogs, with directions for their management, breeding, crossing, rearing, feeding, and preparation for a profitable market—also their diseases and remedies, together with full directions for the management of the dairy.*

By R. L. Allen.

Author of compend of "American Agriculture," etc.—illustrated by numerous plates, representing the various kinds of animals, published by C. M. Saxton, New York, 1848.

From the examination we have been able to give the above work, we should judge it to be a valuable manual, and just such a one as ought to be in the hands of every farmer. Where it is to be obtained we do not know, but presume it will soon find its way into our bookstores.

A Pleasant Excursion.—We had a delightful excursion the other day to the nursery and garden of J. C. Holmes Esq. of this city, located about a mile West of the city, on the Chicago road. The grounds of Mr. H. already exhibit marks of industry, skill and taste, and when the design is fully carried out, they will present rare attractions. In addition to the various kinds of fruit trees, we noticed some shade trees not generally cultivated, or known in this part of the country, especially the mountain ash and the hoop-leaved willow, both of which are very beautiful.

A litttle further on is the beautiful garden of Mr. Ford, in which we noticed some luxuriant specimens of culinary vegetables.

Agricultural Schools.—The Senate of Massachusetts recently passed a bill granting $5,000 to the contemplated agricultural school at Westboro', and $5,000 to a school of the same kind to be established somewhere on the Connecticut river.

☞There is so good a spirit and so much good sense, briefly expressed in the following, that we cannot refrain from giving it. We did not know before, that the drouth was so severe in any part of the interior.

Flint, June 25, 1848.

Mr. Isham:—I have not succeeded yet in getting any subscribers for the Farmer, though I have offered to pay one quarter of the price myself. I take great pleasure in reading the Farmer, and wish my neighbors to share in that pleasure. I believe the Farmer is able to make us wise unto salvation, but I make use of that expression in a limited sense. If we carefully read, and understandingly practice its precepts, and teachings, we shall be saved from many hours and days of useless toil; we shall be saved from the unpleasant effects of erroneous practices, resulting from false theories. In short we shall be saved from mortification and disappointment, and expense in various ways.

Since the 23d of May we have not had rain enough to give the plants one good, thorough watering. The consequence will be shortness of crops, of every description. No crop will suffer more than grass. Enclosed in this I send you one dollar, and I hope at some future time, to be able to send you a number of them.

Respectfully, Ephraim S. Walker.

Alleviation from Cough.—It is said that persons troubled with a cough and who occupy apartments warmed by stoves will find great relief by having a small piece of common resin continually in the water which is placed on the stove.—The aroma of the resin, which the heat of the water throws off, adds a peculiar quality to the atmosphere of the room, which is soothing and bland to the lungs of consumptive persons, as well as to all others, afflicted with cough —*Iowa Farmer.*

Dignity of Agriculture.

There are certain nice gentlemen, who aspire to be special favorites of the dear people, that are forever prating about the dignity of agriculture. Dignity of agriculture! And in what does this dignity consist? Surely not in the mere mechanical performance of the drudgery of the farm. Surely not in going through a round of duties like an atomaton, a sort of machine? Such a "lord of the earth" as that, is but little elevated in dignity above the ox in the furrow. Set such a one to swinging the cradle or the scythe, under the fierce rays of a summer sun—set him to digging the earth with a hoe—or felling the forest with the ax, and is he not a mere animal after all, with about as much dignity as the pig in the sty?

There is. however, such a thing as the dignity of agriculture, but it belongs more to the man than the pursuit. In the pursuit itself, apart from the intelligence and skill of those engaged in it, there is no dignity. What dignity is there in holding on to the plow handle day in and day out? What dignity in planting a tree, gathering a stone heap, digging a ditch, or feeding a hog—so far as the employment itself is concerned—the simple manual toil which is brought into requisition? But suppose we add to this an intelligent acquaintance with the business—suppose one to be able to give an intelligent reason for what he does—suppose he takes lessons, from day to day, from the soil which he turns, the tree which he plants, the stones which he gathers, the ditch which he digs, and the hog which he feeds, thus initiating himself into the mysteries of nature, learning more and more of the wonderful process by which the elements of the soil take the form of vegetable organization, and are finally converted into meat, wool, butter and cheese—suppose him to be a farmer of this class, and how does he rise, at once, from the low level of a mere drudge, to the dignity of a philosopher.

Experience as a Guide.

There are two kinds of agricultural fanatics—the one is all theory, and the other runs into the opposite extreme, and prides himself upon his experience as his only and sure guide. And each in his turn runs himself against snags.—Here is a man of experience who has tried a certain kind of manure, lime, for instance, without effect, and straightway he concludes that lime is worthless as a fertilizer, not considering that the experiment proved nothing more nor less than that his soil already contained an abundance of that element, while, perhaps upon another man's farm, not far distant, its application might be followed with most astonishing results, which would be equally conclusive in proof that this element was wanting in the soil. Now a little science in such a case is a very good thing, and comes to the aid of poor, erring experience with a torch-light in its hand. Says Professor Norton:

"I once attended a meeting of a farmer's club in Ayrshire, Scotland, where the subject of discussion was lime. All were from the same neighborhood, and all had used lime, but scarcely any two agreed in their estimation of its effects. Some considered it one of the most valuable manures employed, and others condemned it entirely. The discussion was perfectly unsatisfactory in its termination, each person being only confirmed in his own opinion. The true explanation of their differences consisted in the fact that the soils of their district were derived from the decomposition of two species of rock, the one of which abounded in lime, while the other was most entirely destitute. This was a case in which experience gave no information as to the course most advisable in individual cases."

Preparing Seed Corn.

The following seems to be a striking instance of the advantage of soaking seed corn. If so small an outlay for preparation, will produce such a difference in the results, then surely it is a matter deserving every farmer's attention.

For the Michigan Farmer.

North Plains, June 10, 1848.

Mr. Isham:—Last year I planted corn the last of May, on a clay soil, naturally *hard*—soaked the seed thirty-six hours in *barn yard juice*, with a lttle plaster added—when ready to plant, took a peck of seed at a time from the soak—put in a pint of soft soap—stirred *well*, and then rolled in plaster as long as it would adhere, forming a complete envelope, then planted in rows north and south three feet one way and 2 feet apart the other, and thus the field was planted with the prepared seed, except the last eight rows with dry seed, and these, compared with the 8 rows joining, of prepared seed (at harvest) were as three to five—and a *measured* acre of the prepared part yielded over a hundred bushels of ears, nothwithstanding the violence of the season, so that the preparation cost absolutely nothing, and the result shows that I got two fifths more corn for it. In haste, H. F. B.

XUM

For the Michigan Farmer.

Horticltural Exhibition.

The second exhibition of the Detroit Horticultural Society, was held on Tuesday June 20th, at Odd Fellows Hall. The following productions were exhibited.

FRUITS.

By John Ford,—Hovey's seedling strawberries, and Sparhawk's Honey Cherries.

By W. A. Bacon—Hudson's Bay Strawberries, Black Tartarian Cherries.

By B. G. Stimson—Hovey's Seedling Strawberries, Early Scarlet, do, Boston Pine, do, Goosberries.

By F. Raymond—Goosberries.

By Hubbard and Davis—Hovey's Seedling and White Alpine Strawberries.

By Mrs. C. H. Jones—White and Red Alpine Strawberries.

By James Dougal—14 varieties of Goosberries, to wit, Warrington's Red, Speechley's Yoxleys Hero, Hopley's Lord Carew, Ocean, Crown Bob, Lion, Champagne Yellow, Woodward's, White Smith, 6 varieties of seedling, and by way of contrast 3 varieties of wild Gooseberries.

VEGETABLES.

By J. Ford—Cucumbers, Lettuce and Radishes.

By J. C. Holmes—Peas, Victoria Rhubarb, Beets and Cucumbers.

By G. Crabb—New Potatoes.

By J. Cotier—Cauliflower, Lettuce, Radishes and Asparagus.

By J. A. Cole—Lettuce, Onions and Beets.

By B. G. Stimson—Early Kent Peas.

GREEN HOUSE PLANTS.

By J. Ford—A large collection of Pelargonium, Fuchsia Petunia, Heliotrope, Agapanthus &c.

By C. C. Trowbridge—Cactus Speciosissimus Fuchsia, Agapanthus and Heliotrope.

By M. H. Webster—Fuchsia Fulgens, Double Feverfew.

By W. Adair—A large & beautiful collection.

By B. G. Stimson—12 varieties of Fuchsia, viz: Eppsi, Globosa, Chanvereii, Salter, Fulgens, Iveryana, Expansa, Coccinea, Coccinea Rosea, Conquerer, Exonensis, and Hector. 16 varieties of Pelargoniums, viz; Lady Duro, Hebe, Mallison, Decorum, Bella Donna, Madona, Queen of Sarum, Variegated Silver Edged, Ivy Leaved, Discount, Gath's Perfection, Dido-Balm Leaved, Rose, Horse Shoe and Apple. Roses, Odoratissima, Agrippina, Sanguinea, and Smith Yellow. Lemon Tree with Fruit, Santana Camara, Dusty Miller, Veronica Specioso, Heliotrope, Night Scented Jassimine, Eucomis Punctata, Begonia Evansiana, Agapantus, Daphne Odora and Hoya Carnosa, Laura Davoust, Hardy Rose, 2 varieties of Cactus, 2 Hydrangea and Oleander.

CUT FLOWERS.

By Wm. Adair, a collection of Roses, do. cut flowers; Mrs. C. H. Jones, a collection of cut flowers; A. H. Adams, 3 specimens White Lily; John Ford; varieties of Sweet William; Mrs. S. Gillet, collection of Roses and Boquets; J. A. Cole, Boquets, Cut Flowers; J. C. Holmes of Roses and 3 Boquets; Miss Mary Palmer, 2 Boquets Roses; Hubbard and Davis, 47 varieties named Hardy Roses, 25 varieties of Cut Flowers, 3 Boquets of Indigenous Flowers, Boquet of Flowers and 1 Floral design representing a vase filled with Roses &c.

Rev Geo. Duffield, W. Isham and John Lumsden were selected as Judges, who awarded the following Prizes:

W. A. Bacon for best quart cherries, (Black Tartarian,)	$0 50
W. A. Bacon, for best quart Strawberries, (Hudson Bay)	50
W. A. Bacon, for 3d do do	25
B. G. Stimson for 2d do do (Hovey's Seedling)	37½
B. G. Stimson for 4th do do Boston Pine,	12½
B. G. Stimson for best collection Green House Plants,	2 00
B. G. Stimson for best Fuchsia	37½
do " half peck Peas,	50
do " Oleander	50
do " Hydrangea	25
F. Raymond best quart of Gooseberies	50
John Ford 2d best quart of cherries (Sparhawk's Honey,)	25
John Ford 2d best collection of vegetables	50
John Ford 2d best collection Green House Plants,	1 00
John Ford 2d best Fuschia	18¾
John Ford best brace of Cucumbers	50
J. A. Cole 2d best lettuce,	12½
Hubbard and Davis for White Alpine Strawberies,	25
Hubbard and Davis best collection of Indigenous Flowers,	1 00
John Ford 2d best do do	50
" 3d best collection Roses	25
Mr. A. C. Hubbard Floral Design, (Special Premium)	50
C. C. Trowbridge, best Cactus,	50
" " Heliotrope,	50
J. C. Holmes best collection of vegetables,	1 00
J. C. Holmes 2d best collection of Roses,	50
Wm. Adair best collection of Roses,	1 00
Wm. Adair 3d best Collection Green House Plants,	50
Wm. Adair 2d best collection of Cut Flowers,	50

The following articles exhibited by persons not members of the Society, and therefore not entitled to premiums, were deemed worthy of especial notice by the Judges, viz: collection of vegetables by J. Cotier, potatoes by George Crabb, collection of cut flowers by Mrs. S. Gillett, collection of cut flowers by Mrs. C. Howard.

NEW INVENTIONS.

Improved Artificfal Hands and Arms.

This is a new discovery of Messrs. Kretschmar and Gildea, of Philadelphia, and is one of the most beautiful specimens of ingenious mechanism that has recently been constructed.

For a considerable period, it has been a matter of the liveliest discussion, whether an artificial arm and hand could be so constructed as to operate in the place of a lost arm on the human body, without the aid and interference of the *sound one.* After a long, slow, and tedious process of experiments, this beautiful and useful invention has been discovered, and is indeed wonderful in its operation, at the same time based upon a simple and plain principle. The small attachment of neat machinery concealed in the centre of the hand, by which all the separate finger-joints are respectively set in motion and to which cords are attached, extending upwards on the arm, and finally fastened at a part of the body, from which point the limb is placed in perfect operation at the will of the wearer, without the least inconvenience or any aid whatsoever of the *sound arm.* The appearance of the arm is in every respect like that of nature's own work; it is light in weight, graceful in position, and when properly clothed, it is a difficult matter to distinguish the artificial from the natural one.

"The frame work of Messrs. Kretschmar and Gildea's artificial limbs is of steel and is quite light. The various bones of each finger are represented by steel plates connected by readily movable joints. A lever extends from each joint to the next below it, the lowest being connected with a double lever placed in the palms. The whole is so arranged that when the latter is moved, the fingers close, each joint moving in quite a natural way, and as soon as the moving power ceases to act, the fingers are drawn back to their original positions by springs upon the back of the hand. When the apparatus is complete, it can be put upon any stump so as to resemble very closely the natural hand. The point of motion is the shoulder of the opposite side, the mere throwing of which forward for the space of an inch or less will close the hand so as to grasp any object firmly and retain it in every motion of the arm. By the arrangement of the levers, the wearer may close either the index and middle fingers or the two outer ones at will. A lever connected with the thumb, at the same time shoves it out from its position parallel with the next finger, and brings it more in opposition to the hand. Complicated as this may appear in the description, it is very simple in action and not apt to be deranged. There can be no doubt that this will prove a highly useful improvement."—*Farmer and Mechanic.*

A new Rat Trap.—Take a tub or kettle, fill it to within six inches of the top with water, cover it with chaff or bran, and place it at night where the rats resort. By this method thirty-six rats have been taken in one night.—*Ex.*

Atmospheric Churn.

This churn, which was the invention of Mr. Bishop, of Derry, and which has been slightly noticed in some of our Journals, differs from all others in the method of making butter, which is accomplished by forcing a full current of atmospheric air through the cream, by means of a forcing pump. The churn is made of tin, very simple in its construction, portable and light, and requires but little expense to keep it in perfect order for working. A writer in the Farmer's Magazine, (Eng.,) describes it as fitting into a tin cylinder provided with a stop cock and funnel, so as to heat the cream to the necessary temperature. The air passes through a glass tube connected with the air-pump, descending nearly to the bottom of the churn. The pump is worked by means of a winch, which is not so laborious as the common churn. Independently of the happy application of science to this important department of domestic economy, in a practical point of view, it is extremely valuable. The milk is not moved by a dasher, as in the common churn; but the oxygen of the atmosphere is brought into close contact with the cream, so as to effect a full combination of the butyracious part, and convert it all into butter. On one occasion the churning was carried on for the space of one hundred and forty-five minutes, and eleven gallons of cream produced twenty-six pounds of butter. Churns constructed on the above principle would be rather a novelty in this country.—*Farmer and Mechanic.*

A New Steam Engine.—The Cincinnati Dollar paper says that Mr. J. H. Lansing, of that city, has "fitted up two small steam engines, in a temporary way, one a high pressure steam engine, the other a low steam condensing engine, on the Watt & Bolton principle. When in operation the low steam engine, though very imperfect in its construction, exhibited power equal to the high one; not with steam from a boiler, but with steam from a reservoir of the escape steam from the high steam engine, which we had considered and pronounced an impossibility. The inventor asserts most positively, that he can furnish an engine on this principle, in place of the old one lately fitted up at the Water Works and run it constatly with the escape steam from the two, (perhaps one) new engines, with as much power as the old one, now in operation can be run with steam direct from the boilers, 100 to 120 lbs. pressure to the inch, and now run at an expense of five or six thousand dollars per annum for fuel.—Consequently the second engine on this principle, could be run all the time the other two are running, without any expense of fuel.—*Farmer and Mechanic.*

GENERAL INTELLIGENCE.

By Telegraph.

NEW YORK, June 26, 3 P. M.—The Express Mail Steamer Buena Vista, from Halifax, brought the Britannia's news to Boston last night. There is much confusion in France, though affairs are generally more quiet. Prince de Joinville had been arrested in Paris. Prince Louis Napoleon and M. Theirs had been elected to the assembly. It is rumored that Lamartine and Ladru Rollin would resign, and Theirs would probably succeed them. Lamartine is suspected of conniving at the affairs of the 15th May. A decree has been passed to prevent turbulent assemblies in Paris. Sodiers were obliged to charge a large assembly at Port St. Dennis with fixed bayonets, and killed many. The committee on constitution declared for a Democratic Republic. Besides their present rights, the people are to have free education, and a right of labor and assistance. A great banquet of 100,000 is to come off at Vincennes, and created some uneasiness. Spain requires all Englishmen to give security for their conduct. The cholera is raging in Russia: 150 cases occurred in Moscow in one week. Nothing important from Austria. The Emperor has gone to Auspruck, and refuses to return to Vienna. Disturbances between the people and the nobles. The latter leaving Vienna. The Bankers, Rothschild and other rich men fled. The foreign Ambassador had also gone to Dubling. Charles Albert has captured Peachrist and defeated 3000 Austrians at Goato. The Pope is recovering popularity.

Ireland.—On Saturday last, in Dublin, Mr. Mitchell, convicted of treason upon the previous evening, was sentenced to 14 years transportation, and immediately removed under an escort squadron of cavalry to a steamer of war, which was in waiting to convey him to the convict depot at Spike Island, in the Cove of Cork. His destination is Bermuda, whither he has already sailed, to be incarcerated on board a dock yard hulk. Intense excitement prevailed in Dublin up to Sunday night, but has since given way to a deep and solemn silence, which denotes stern preparation and resolve. A liberal provision will be made by the Nation for the convict's family.

The European Times says:—"When the verdict of guilty against Mr. Mitchell was delivered, a scene of great confusion ensued in the Court, but the tranquility of the city of Dublin was not materially disturbed.

On the following day, the 27th ult., Mr. Mitchell was brought up for sentence, and after some speeches, equally defiant as his previous conduct, of all authority whatsoever, he was sentenced by the Court to 14 years transportation. On the same day he was conveyed in the ordinary prison van, to a government steamer lying close to the quay.

By a vote of the Repeal Association, the wife and children of Mr. Mitchell are to be adopted by the people of Ireland, and their comfort and education provided for at the public expense, out of a subscription to be raised.

The type of the United Irishman newspaper, were immediately seized by the government, and his property sequestered. That paper is accordingly at an end, but arrangements are in progress for bringing out a new journal, of a similar tendency, under the sovereign style, title and dignity of the *Irish Felon.*

The language of Mr. John O'Connell, at the Repeal Association, when urging the members to adopt the family of Mitchell, and in expressing indignation against the Attorney General, was particularly exciting. He called upon all Irishmen never again to speak to the Attorney General, but to spit upon him as he had spit upon the Catholics—not to expose themselves to be struck down singly, but to band themselves together as determined and united Irishmen.

Mr. Mitchell arrived at Spike Island, Cork, on Sunday night, and was immediately handed over to the Governor. He will immediately assume the convict dress, and be treated in every respect like an ordinary convict.

From the declaration of Sir George Grey, in the House of Commons, it appears that the government has determined on carrying out the sentence against him of transportation beyond the seas. In consequence, however, of the bad state of health under which the unfortunate man is suffering, they have relinquished the intention of sending him to Norfolk Island, but have ordered him to be conveyed to her Majesty's dock-yard at Bermuda, and there, on board the Thames convict hulk, to undergo his first year's sentence.

H. B. Steam sloop Scourge, of six guns, Com. Wingrove, left Portsmouth on Monday morning for Cork, to take on board the unhappy Mr. Mitchell, and other prisoners, and proceeded immediately to Bermuda.

A letter from Trent states that a sharp action between the regular troops of the Milanese and some Austrian regiments, assisted by irregular corps, had taken place near the Lake of Idro, in which the latter were victorious, having taken Caffaro, a strong post called Castel Lodrone and repulsed the Italians as far as Roca d'Anfo.

The Schleswig Holstein Journal, under date of May 30th, announced that a collision had taken place between the Danes and the Germans, at Sunderlirtt. The Danes landed on the main land and attacked the advanced posts of the German army under the heights of Dupeller, while a number of gun boats assailed the Germans in another quarter. Large numbers were stated to have been killed and wounded on both sides; and at 7 o'clock in the evening, the Germans retreated by Gravenstein, the Danes advancing after them. About 7,000 were engaged.

XUM

Detroit Wool Depot.

In Atwater Street, back of the Michigan Exchange, formerly the storehouse of Gillet and Desnoyers.

THE undersigned will open a depot at the above mentioned place, and be prepared to receive from farmers their wool immediately after shearing. His plan will be similar to that of the Eastern depots, which have proved so satisfactory to both wool-growers and manufacturers; that is, if lots of wool are of an even quality, and if the owner wishes, each man's clip will be kept and sold separately. If not even in quality, they will be thrown into sorts according to quality and condition. As soon as a sufficient quantity is collected, Eastern manufacturers will be invited to examine and purchase. No difficulty is anticipated in effecting prompt cash sales, at good rates, as the orders on wool depots from manufacturers, have hitherto generally outrun the supply. Wool may be delivered at the depot from wagons, or if sent by Railroad, will be taken by me from the carhouse, without expense or care to the owner. It will be sufficient for him to put his wool aboard the cars, taking a receipt for the same, mark the bales with his name, and consign them to the "Detroit Wool Depot," and all will be safe. Insurance will be effected on all lots as soon as arrived. All charges, *including insurance*, cartage, sorting, storage, shipping and for effecting sale, will be included in a commission of one and a half cents on the pound.

EARDLEY IVES.

Detroit March 27th, 1848.

REFERENCES.—E. P, Hastings, C. C. Trowbridge, B. F. .H Witherell, Z. Pitcher, M. D. M. Palmer, Shubael Conant.

PETERS'
BUFFALO WOOL DEPOT,

SECOND YEAR.

I have established a Wool Depot upon the following plan; *First*, The Wool is thrown into 10 sorts; Merino wool being No. 1, the grades numbering down from 1 to 5; the coarsest common wool being No. 5. Saxony wool is thrown into extra, and prime 1 and prime 2.—Combing and De Laines make 2 sorts more. *Second*, I charge for receiving, sorting, storing, and selling, ONE CENT PER POUND; this includes all charges at Depot, except insurance. *Third*, Sales are made for cash, except when otherwise directed by owner.

☞All wool consigned to me should be marked with the owner's name.

Warehouse corner Washington and Exchange streets.

Buffalo, Jan. 1, 1848. T. C. PETERS.

DETROIT SEED STORE AND AGRICULTURAL WAREHOUSE.—In compliance with the expressed wish of a great number of the intelligent and enterprising farmers of Michigan, the subscribers have established *a seed store and agricultural warehouse* at Detroit, at which will be kept constantly on hand, the choicest varieties of garden, field and flower seeds, obtained from such sources, that they feel no hesitation in recommending them to be of the very best quality. Also, Agricultural and Horticultural implements and labor-saving machines, such as are usually kept at the agricultural warehouses at the East, among which are Pratt's Patent corn-planter and seed drill, Pennock's patent drill (for drilling in wheat and other small grain,) Pitt's thrashing machine, improved harrow, improved cultivator, a great variety of plows, corn shellers, straw cutters and washing machines of the most approved kinds, together with Rich's Beehive, Montgolphier's Hydraulic Ram, Grant's Fanning Mill, Camwheel Churn, &c.

At Nos. 93 and 95 Woodward Avenue, nearly opposite the National Hotel.

Detroit, June 1st. 1848.

F. F. PARKER & BROTHER.

☞Those postmasters who may have money in their hands for the Michigan Farmer, are requested to forward it, with as little delay as practicable.

☞If there is a Mr. Parker operating as agent for the Michigan Farmer in the Western part of the State, we should like to hear from him, either directly from himself, or through the kindness of some other one, and that immediately.

The agency of Mr. Sykes who has been operating for the Farmer in Canada, is hereby revoked.

☞The new postage bill which has passed the House of Representatives, exempts from postage all newspapers within thirty miles of the place of publication, and reduces it to a half a cent for any distance not exceeding one hundred miles.

TERMS.—The MICHIGAN FARMER is published at Detroit, twice a month, by WARREN ISHAM, at one dollar a year in advance—after three months $1 25—after six months $1 50—after nine months $1 75. No subscription taken for less than one year, nor discontinued till all arrerages are paid. To clubs, five copies for four dollars.

Office, on King's corner, third story.

Market Intelligence.

DETROIT PRICE CURRENT.

Flour, bbl.	$4 62½		Salt,	$1 25	a	$1 50
Corn, bus.	a 44		Butter,	9	a	10
Oats,	a 34		Eggs, doz.			11
Rye,	a 42		Hides, lb.	3	a	6½
Barley,	56 a		Wood, cord,	2 25	a	2 50
Hogs, 100 lbs.	3 00 a 3 50		Wheat, bus.			90
Apples, bush	a 1 00		Hams, lb.	6	a	6½
Potatoes,	62½		Onions, bu.	41	a	50
Hay, ton,	8 00 a 10 00		Cranberries,		a	1 25
Wool, lb.	15 a 30		Buckwheat 100 lbs.			1 50
Pig iron, ton,	35 00 a40 00		Indian meal, "			1 00
Coal, Leh.	11 00 a13 00		Beef, do	3 50	a	4 50
do Ohio,	4 00 a 5 00		Lard, lb. retail,			7
Peas, bu,	a 75		Honey.			10
Beans,	75 a 80		Apples, dried,			1 00
Beef, bbl.	5 00 a 6 00		Peaches, do		a	2 00
Pork,	8 00 a10 00		Clover seed, bu.			4 50
White fish,	6 00 a 7 00		Herd's grass do do			1 00
Trout,	5 50 a 6 50		Flax do			75
Cod fish, lb.	5 a 5½		Lime, " bbl			75
Cheese,	6 a 8					

Improved Railroad Portable Horse Powers, and Over-shot Threshing Machines and Separators.—Having sold upwards of seventy setts of the above celebrated machines the past season, and to many large farmers in this state, Vermont, Massachusetts, Michigan, Ohio, Ilinois, Wisconsin, Canada, and with entire satisfaction in every case, the subscriber would call the particular attention of farmers and mechanics desiring such machines, before purchasing—as he is prepared to offer a better finished article, with some slight improvements, at a less price, than before—for full particulars, description, &c. see catalogue, furnished gratis at the warehouse, Number 10 and 12, Green street, Albany, or by mail to those desiring them. HORACE L. EMERY.

Abany March 16th, 1848.